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## BATTERY-POWERED PATIENT IMPLANTABLE DEVICE

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### Abstract

A device configured for implanting beneath a patient's skin for the purpose of tissue, e.g., nerve or muscle, stimulation and/or parameter monitoring and/or data communication. Devices in accordance with the invention are comprised of a sealed housing, typically having an axial dimension of less than 60 mm and a lateral dimension of less than 6 mm, having a non-circular, e.g., an oval or polygon shaped, cross-section containing a power source for powering electronic circuitry within including a controller, an address storage means, a data signal receiver and an input/output transducer. When used as a stimulator, such a device is useful in a wide variety of applications to stimulate nerves and associated neural pathways. Alternatively, devices of the present invention are configurable to monitor a biological parameter. Furthermore, a placement structure is shown for facilitating placement of the implantable device proximate to neural / muscular tissue.